

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 09/494,213

Filing Date: January 24, 2000

Applicant: Michael A. Martinelli et al.

Group Art Unit: 3737

Examiner: Shawna J. Shaw

Title: METHOD AND SYSTEM FOR NAVIGATING
A CATHETER PROBE

Attorney Docket: 5074A-000032/COB

Director of the United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to 37 C.F.R. §§ 1.56, 1.97 and 1.98, Applicant hereby submits an Information Disclosure Statement for consideration by the Examiner.

I. LIST OF PATENTS, PUBLICATIONS, AND OTHER INFORMATION

The patents, publications and other information requested to be considered by the Office (except unpublished U.S. patent applications) are listed on Form 1449 attached hereto.

II. COPIES

A. Submitted herewith is a legible copy of (i) each foreign patent; (ii) each publication or that portion which caused it to be listed, other than U.S. patents and U.S. patent application publications unless required by the Office; (iii) each unpublished U.S. application listed below in Section IV (i.e., including the specification, claims, and any drawing of the application, or that portion of the application which caused it to be listed, including any claims directed to that portion), except for such applications filed on or after June 30, 2003, pursuant to the Waiver of the Copy Requirement in 37 C.F.R. 1.98 (OG Notice dated October 19, 2004); and (iv) all other information or that portion which caused it to be listed.

06/03/2005 AKLECH1 00000009 09494213
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02 FC:1806

B. Any patents, publications or other information which are listed on Form 1449 or on the copies of PTO-892, but which are not enclosed herewith, were previously cited by or submitted to the PTO in one of the following applications which has been relied upon for an earlier filing date under 35 U.S.C. § 120:

U.S. Serial Number
09/231,854

U.S. Filing Date
January 14, 1999

C. This is a PCT application in the entry of the National Phase in the United States. A copy of the International Search Report is attached for the Examiner's information. The documents listed on the International Search report are listed on the attached Form 1449 for consideration by the Examiner and for listing on any patent resulting from this application. If the International Search report was from the US, EPO, or JPO search authorities, copies of these references should have been supplied to the USPTO under the trilateral agreement and are believed to be in the file of the above-identified application. (MPEP 1893.03(g).)

III. CONCISE EXPLANATION OF THE RELEVANCE (check at least one box)

A. Except as may be indicated below in (B), all of the patents, publications or other information are in the English language (concise explanation not required).

B. A concise explanation of the relevance of each patent, publication or other information listed that is not in the English language is as follows (see 37 C.F.R. § 1.98(a)(3)):

1. See the attached foreign patent office communication from a counterpart foreign application:

2. English translations are provided:

3. Other:

Japanese Reference JP 2765738 appears to disclose a catheter that may be positioned relative to a selected site to produce a signal to create a data set.

German Reference DE 3042343 appears to disclose a system operable to receive a signal regarding a point in space.

European Reference EP 0 581 704 has a U.S. equivalent of U.S. Patent No. 5,447,154.

France Reference No. 2417970 has a U.S. equivalent of U.S. Patent No. 4,418,422.

German Reference No. DE 10085137 has a U.S. equivalent of U.S. Patent No. 6,499,488.

An English abstract is provided for Other Document reference No. 11 by Champleboux, entitled "Utilisation de Fonctions Splines pour la Mise au Point D'un Capteur Tridimensionnel sans Contact," Quelques Applications Medicales, July 1991.

An English language abstract is provided for Other Document reference No. 50 by Lavallee, entitled "VI Adaption de la Methodologie a Quelques Applications Cliniques," Chapitre VI, pp. 133-148.

An English language abstract is provided for Other Documents reference No. 55 by Mazier et al., entitled Chirurgie de la Colonne Vertebrale Assistee par Ordinateur: Appication au Vissage Pediculaire, Innov. Tech. Biol. Med., Vol. 11, No. 5, 1990, pp. 559-566.

Other Documents reference No. 66, by Sautot, entitled "Vissage Pediculaire Assiste Par Ordinateur" appears to disclose a fluoroscopic image guidance and system.

Other Documents reference No. 75 by Watanabe, "Neuronavigator," Igaku-no-Ayumi, Vol. 137, No. 6, May 10, 1986, pp. 1-4, an English translation is provided.

C. The following additional information is provided for the Examiner's consideration.

IV. CROSS REFERENCE TO RELATED APPLICATION(S)

A. The Examiner is advised that the following co-pending application(s) contain(s) subject matter that may be related to the present application. By bringing this(these) application(s) to the Examiner's attention, Applicant(s) does (do) not waive the confidentiality provisions of 35 U.S.C. § 122.

| <u>Serial No.</u> | <u>Filing Date</u> | <u>Art Unit</u> |
|-------------------|--------------------|-----------------|
|-------------------|--------------------|-----------------|

V. THIS IDS IS BEING FILED UNDER

A. **37 C.F.R. § 1.97(b):** (check only one box)

1. within three months of the filing date of a national application other than a continued prosecution application under § 1.53(d) (37 C.F.R. § 1.97(b)(1)). No fee or certification is required.
2. within three months of the date of entry of the national stage as set forth in § 1.491 in an international application (37 C.F.R. § 1.97(b)(2)). No fee or certification is required.
3. before the mailing of a first Office Action on the merits (37 C.F.R. § 1.97(b)(3)). No fee or certification is required. In the event that a first Office Action on the merits has been issued, please consider this IDS under 37 C.F.R. § 1.97(c) and see the certification under 37 C.F.R. § 1.97(e) below; or, if no certification has been made, charge our deposit account a fee in the amount of \$180.00 as required by 37 C.F.R. § 1.17(p).
4. before the mailing of a first Office Action after the filing of a request for continued examination under 37 C.F.R. § 1.114. No fee or certification is required.

B. **37 C.F.R. § 1.97(c):** (check only one box)

before the mailing date of either any Final Office Action under 37 C.F.R. § 1.113, a Notice of Allowance under 37 C.F.R. § 1.311, or an action that otherwise closes prosecution.

1. No certification; therefore, a fee in the amount of \$180.00 is required by 37 C.F.R. § 1.17(p).
2. See the certification below. No fee is required.

C. **37 C.F.R. § 1.97(d):**

after the mailing date of either a Final Office Action under 37 C.F.R. § 1.113 or a Notice of Allowance under 37 C.F.R. § 1.311, yet on or before payment of the issue fee.

1. See the certification below. A fee in the amount of \$180.00 is required by 37 C.F.R. § 1.17(p).

VI. CERTIFICATION UNDER 37 C.F.R. § 1.97(e): (check only one box)

The undersigned hereby certifies that:

A. each item of information contained in this IDS was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS (See 37 C.F.R. § 1.97(e)(1)). See further statement under 37 C.F.R. 1.704(d) below in section VII, if applicable; or

B. no item of information contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this IDS was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this IDS (See 37 C.F.R. § 1.97(e)(2)).

C. some of the items of information were first cited in a communication from a foreign patent office. As to this information, the undersigned hereby certifies that each item of information contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS. As to the remaining information, the undersigned hereby certifies that no item of this remaining information contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this IDS was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this IDS.

VII. STATEMENT UNDER 37 C.F.R. 1.704(d)

The undersigned hereby states that:

each item of information contained in this IDS was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this IDS.

VIII. PAYMENT OF FEES (check only one box)

- A. A check in the amount of \$180.00 is enclosed for the above identified fee.
- B. Please charge Deposit Account No. 08-0750 in the amount of \$180.00 for the above-indicated fee. A duplicate copy of this paper is attached.

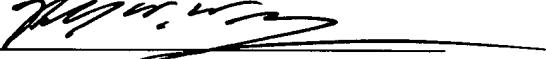
The above references are being cited only in the interest of candor and without any admission that they constitute statutory prior art, contain matter which anticipates the invention, or which would render the same obvious, either singly or in combination, to a person of ordinary skill in the art. Furthermore, this Information Disclosure Statement shall not be construed as a representation that a search has been made.

If it is determined that this IDS has been filed under the wrong rule, the PTO is requested to consider this IDS under the proper rule (with a petition if necessary) and charge the appropriate fee to Deposit Account No. 08-0750.

Please charge any additional fees or credit any overpayment pursuant to 37 C.F.R. § 1.16 or § 1.17 to Deposit Account No. 08-0750.

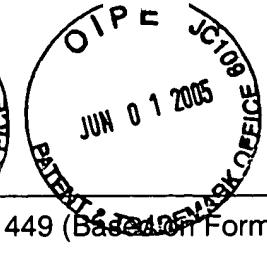
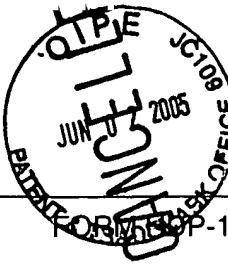
Respectfully submitted,

Dated: June 1, 2005

By: 
Richard W. Warner
Reg. No. 38,043

Harness, Dickey & Pierce, P.L.C.
P.O. Box 828
Bloomfield Hills, Michigan 48303
(248) 641-1600

RWW/MLT/cn/jb



FORM PTO-1449 (Based on Form PTO-1449)

**PATENT AND TRADEMARK OFFICE
INFORMATION DISCLOSURE CITATION**
(Use several sheets if necessary)

Sheet 1 of 19

| | |
|------------------------------|------------|
| ATTORNEY DOCKET No. | SERIAL No. |
| 5074A-000032/COB | 09/494,213 |
| APPLICANT | |
| Michael A. Martinelli et al. | |
| FILING DATE | GROUP |
| January 24, 2000 | 3737 |

U.S. PATENT DOCUMENTS

| Ref. Desig. | Examiner's Initials | Document Number | Date | Name | Class/ Subclass | (If appropriate) Filing Date |
|-------------|---------------------|-----------------|------------|------------------|-----------------|------------------------------|
| 1. | | 1,576,781 | 03/1926 | Phillips | | |
| 2. | | 1,735,726 | 11/1929 | Bornhardt | | |
| 3. | | 2,407,845 | 09/1946 | Nemeyer | | |
| 4. | | 2,650,588 | 09/1953 | Drew | | |
| 5. | | 2,697,433 | 12/1954 | Sehnder | | |
| 6. | | 3,016,899 | 01/1962 | Stenvall | | |
| 7. | | 3,017,887 | 01/1962 | Heyer | | |
| 8. | | 3,061,936 | 11/1962 | Dobbeleer | | |
| 9. | | 3,073,310 | 01/1963 | Mocarski | | |
| 10. | | 3,294,083 | 12/1966 | Alderson | | |
| 11. | | 3,367,326 | 02/1968 | Frazier | | |
| 12. | | 3,577,160 | 05/1971 | White | | |
| 13. | | 3,702,935 | 11/1972 | Carey et al. | | |
| 14. | | 3,704,707 | 12/1972 | Halloran | | |
| 15. | | 3,941,127 | 03/1976 | Froning | | |
| 16. | | 4,037,592 | 07/1977 | Kronner | | |
| 17. | | 4,052,620 | 10/1977 | Brunnett | | |
| 18. | | 4,117,337 | 09/26/1978 | Staats | | |
| 19. | | 4,202,349 | 05/1980 | Jones | | |
| 20. | | 4,328,813 | 05/1982 | Ray | | |
| 21. | | 4,358,856 | 11/09/1982 | Stivender et al. | | |

Examiner:

Date Considered:

EXAMINER: Please initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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| FORM HDP-1449 (Based on Form PTO-1449) | | ATTORNEY DOCKET No. | SERIAL No. |
| | | 5074A-000032/COB | 09/494,213 |
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| U.S. PATENT DOCUMENTS | | | | | | |
|-----------------------|---------------------|-----------------|------------|-------------------|-----------------|------------------------------|
| Ref. Desig. | Examiner's Initials | Document Number | Date | Name | Class/ Subclass | (If appropriate) Filing Date |
| 22. | | 4,368,536 | 01/1983 | Pfeiler | | |
| 23. | | 4,403,321 | 09/1983 | DiMarco | | |
| 24. | | 4,418,422 | 11/1983 | Richter et al. | | |
| 25. | | 4,485,815 | 12/1984 | Amplatz | | |
| 26. | | 4,543,959 | 10/01/1985 | Sepponen | | |
| 27. | | 4,548,208 | 10/22/1985 | Niemi | | |
| 28. | | 4,621,628 | 11/1986 | Bludermann | | |
| 29. | | 4,625,718 | 12/1986 | Olerud et al. | | |
| 30. | | 4,645,343 | 02/1987 | Stockdale et al. | | |
| 31. | | 4,651,732 | 03/24/1987 | Frederick | | |
| 32. | | 4,653,509 | 03/1987 | Oloff et al. | | |
| 33. | | 4,673,352 | 06/1987 | Hansen | | |
| 34. | | 4,706,665 | 11/17/1987 | Gouda | | |
| 35. | | 4,722,056 | 01/26/1988 | Roberts et al. | | |
| 36. | | 4,722,336 | 02/1988 | Kim et al. | | |
| 37. | | 4,727,565 | 02/23/1988 | Ericson | | |
| 38. | | 4,737,921 | 04/12/1988 | Goldwasser et al. | | |
| 39. | | 4,750,487 | 06/1988 | Zanetti | | |
| 40. | | 4,771,787 | 09/20/1988 | Wurster et al. | | |
| 41. | | 4,791,934 | 12/20/1988 | Brunnett | | |

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| U.S. PATENT DOCUMENTS | | | | | | |
|-----------------------|---------------------|-----------------|------------|---------------------|-----------------|------------------------------|
| Ref. Desig. | Examiner's Initials | Document Number | Date | Name | Class/ Subclass | (If appropriate) Filing Date |
| 42. | | 4,793,355 | 12/1988 | Crum et al. | | |
| 43. | | 4,797,907 | 01/1989 | Anderton | | |
| 44. | | 4,803,976 | 02/1989 | Frigg et al. | | |
| 45. | | 4,821,206 | 04/11/1989 | Arora | | |
| 46. | | 4,845,771 | 07/1989 | Wislocki et al. | | |
| 47. | | 4,889,526 | 12/26/1989 | Rauscher et al. | | |
| 48. | | 4,923,459 | 05/1990 | Nambu | | |
| 49. | | 4,931,056 | 06/1990 | Ghajar et al. | | |
| 50. | | 4,945,914 | 08/1990 | Allen | | |
| 51. | | 4,951,653 | 08/1990 | Fry et al. | | |
| 52. | | 5,013,317 | 05/1991 | Cole et al. | | |
| 53. | | 5,027,818 | 07/02/1991 | Bova et al. | | |
| 54. | | 5,030,196 | 07/09/1991 | Inoue | | |
| 55. | | 5,030,222 | 07/1991 | Calandruccio et al. | | |
| 56. | | 5,031,203 | 07/1991 | Trecha | | |
| 57. | | 5,057,095 | 10/15/1991 | Fabian | | |
| 58. | | 5,079,699 | 01/07/1992 | Tuy et al. | | |
| 59. | | 5,094,241 | 03/10/1992 | Allen | | |
| 60. | | 5,097,839 | 03/24/1992 | Allen | | |
| 61. | | 5,107,839 | 04/28/1992 | Houdek et al. | | |

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| U.S. PATENT DOCUMENTS | | | | | | |
|-----------------------|---------------------|-----------------|------------|--------------------|-----------------|------------------------------|
| Ref. Desig. | Examiner's Initials | Document Number | Date | Name | Class/ Subclass | (If appropriate) Filing Date |
| 62. | | 5,107,843 | 04/1992 | Aarnio, et al. | | |
| 63. | | 5,107,862 | 04/28/1992 | Fabian et al. | | |
| 64. | | 5,119,817 | 06/09/1992 | Allen | | |
| 65. | | 5,142,930 | 09/01/1992 | Allen et al. | | |
| 66. | | 5,160,337 | 11/1992 | Cosman | | |
| 67. | | 5,178,164 | 01/12/1993 | Allen | | |
| 68. | | 5,178,621 | 01/1993 | Cook et al. | | |
| 69. | | 5,186,174 | 02/1993 | Schlondorff et al. | | |
| 70. | | 5,188,126 | 02/23/1993 | Fabian et al. | | |
| 71. | | 5,190,059 | 03/02/1993 | Fabian et al. | | |
| 72. | | 5,197,965 | 03/1993 | Cherry et al. | | |
| 73. | | 5,211,176 | 05/1993 | Ishiguro et al. | | |
| 74. | | 5,212,720 | 05/1993 | Landi et al. | | |
| 75. | | 5,219,351 | 06/1993 | Teubner et al. | | |
| 76. | | 5,233,990 | 08/1993 | Barnea | | |
| 77. | | 5,251,127 | 10/1993 | Raab | | |
| 78. | | 5,291,199 | 03/01/1994 | Overman et al. | | |
| 79. | | 5,305,091 | 04/1994 | Gelbart et al. | | |
| 80. | | 5,305,203 | 04/1994 | Raab | | |
| 81. | | 5,320,111 | 06/1994 | Livingston | | |

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| U.S. PATENT DOCUMENTS | | | | | | |
|-----------------------|---------------------|-----------------|------------|------------------------|-----------------|------------------------------|
| Ref. Desig. | Examiner's Initials | Document Number | Date | Name | Class/ Subclass | (If appropriate) Filing Date |
| 82. | | 5,325,728 | 07/05/1994 | Zimmerman et al. | | |
| 83. | | 5,329,944 | 07/19/1994 | Fabian et al. | | |
| 84. | | 5,333,168 | 07/1994 | Fernandes et al. | | |
| 85. | | 5,353,800 | 10/11/1994 | Pohndorf et al | | |
| 86. | | 5,353,807 | 10/11/1994 | DeMarco | | |
| 87. | | 5,394,457 | 02/1995 | Leibinger et al. | | |
| 88. | | 5,397,329 | 03/1995 | Allen | | |
| 89. | | 5,399,146 | 03/21/1995 | Nowacki et al. | | |
| 90. | | 5,400,384 | 03/1995 | Fernandes et al. | | |
| 91. | | 5,423,334 | 06/13/1995 | Jordan | | |
| 92. | | 5,426,683 | 06/1995 | O'Farrell, Jr., et al. | | |
| 93. | | 5,426,687 | 06/1995 | Goodall et al. | | |
| 94. | | 5,427,097 | 06/1995 | Depp | | |
| 95. | | 5,427,367 | 06/20/1995 | Shapiro et al. | | |
| 96. | | 5,444,756 | 08/1995 | Pai et al. | | |
| 97. | | 5,446,548 | 08/1995 | Gerig et al. | | |
| 98. | | 5,447,154 | 09/05/1995 | Cinquini et al. | | |
| 99. | | 5,448,610 | 09/1995 | Yamamoto et al. | | |
| 100. | | 5,458,718 | 10/17/1995 | Venkitachalam | | |
| 101. | | 5,464,446 | 11/1995 | Dreessen et al. | | |

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| Examiner: | Date Considered: |
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| U.S. PATENT DOCUMENTS | | | | | | |
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| Ref. Desig. | Examiner's Initials | Document Number | Date | Name | Class/ Subclass | (If appropriate) Filing Date |
| 102. | | 5,478,341 | 12/1995 | Cook et al. | | |
| 103. | | 5,478,343 | 12/1995 | Ritter | | |
| 104. | | 5,490,196 | 02/06/1996 | Rudich et al. | | |
| 105. | | 5,494,034 | 02/27/1996 | Schlondorff et al. | | |
| 106. | | 5,503,416 | 04/1996 | Aoki et al. | | |
| 107. | | 5,515,160 | 05/07/1996 | Schulz et al. | | |
| 108. | | 5,531,227 | 07/02/1996 | Schneider | | |
| 109. | | 5,531,520 | 07/02/1996 | Grimson et al. | | |
| 110. | | 5,543,951 | 08/06/1996 | Moehrmann | | |
| 111. | | 5,551,429 | 09/1996 | Fitzpatrick et al. | | |
| 112. | | 5,575,794 | 11/1996 | Walus et al. | | |
| 113. | | 5,583,909 | 12/1996 | Hanover | | |
| 114. | | 5,595,193 | 01/1997 | Walus et al. | | |
| 115. | | 5,596,228 | 01/1997 | Anderton et al. | | |
| 116. | | 5,617,462 | 04/1997 | Spratt | | |
| 117. | | 5,619,261 | 04/1997 | Anderton | | |
| 118. | | 5,627,873 | 05/1997 | Hanover et al. | | |
| 119. | | 5,628,315 | 05/13/1997 | Vilsmeier et al. | | |
| 120. | | 5,636,644 | 06/10/1997 | Hart et al. | | |
| 121. | | 5,638,819 | 06/17/1997 | Manwaring et al. | | |

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| Examiner: | Date Considered: |
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| U.S. PATENT DOCUMENTS | | | | | | |
|-----------------------|---------------------|-----------------|------------|--------------------|-----------------|------------------------------|
| Ref. Desig. | Examiner's Initials | Document Number | Date | Name | Class/ Subclass | (If appropriate) Filing Date |
| 122. | | 5,642,395 | 06/1997 | Anderton et al. | | |
| 123. | | 5,643,268 | 07/01/1997 | Vilsmeier et al. | | |
| 124. | | 5,664,001 | 09/1997 | Tachibana et al. | | |
| 125. | | 5,674,296 | 10/07/1997 | Bryan et al. | | |
| 126. | | 5,681,260 | 10/28/1997 | Ueda et al. | | |
| 127. | | 5,682,886 | 11/04/1997 | Delp et al. | | |
| 128. | | 5,690,108 | 11/1997 | Chakeres | | |
| 129. | | 5,695,501 | 12/09/1997 | Carol et al. | | |
| 130. | | 5,697,377 | 12/16/1997 | Wittkampf | | |
| 131. | | 5,702,406 | 12/30/1997 | Vilsmeier et al. | | |
| 132. | | 5,711,299 | 01/27/1998 | Manwaring et al. | | |
| 133. | | 5,715,822 | 02/10/1998 | Watkins | | |
| 134. | | 5,715,836 | 02/10/1998 | Kliegis et al. | | |
| 135. | | 5,727,552 | 03/17/1998 | Ryan | | |
| 136. | | 5,727,553 | 03/17/1998 | Saad | | |
| 137. | | 5,730,130 | 03/1998 | Fitzpatrick et al. | | |
| 138. | | 5,735,278 | 04/07/1998 | Hoult et al. | | |
| 139. | | 5,742,394 | 04/1998 | Hansen | | |
| 140. | | 5,744,953 | 04/28/1998 | Hansen | | |
| 141. | | 5,748,767 | 05/1998 | Raab | | |

| | |
|-----------|------------------|
| Examiner: | Date Considered: |
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EXAMINER: Please initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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| FORM HDP-1449 (Based on Form PTO-1449) | | ATTORNEY DOCKET NO. | SERIAL NO. |
| | | 5074A-000032/COB | 09/494,213 |
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| U.S. PATENT DOCUMENTS | | | | | | |
|-----------------------|---------------------|-----------------|------------|------------------------|----------------|------------------------------|
| Ref. Desig. | Examiner's Initials | Document Number | Date | Name | Class/Subclass | (If appropriate) Filing Date |
| 142. | | 5,749,835 | 05/12/1998 | Glantz | | |
| 143. | | 5,755,725 | 05/26/1998 | Druais | | |
| 144. | | 5,767,669 | 06/16/1998 | Hansen et al. | | |
| 145. | | 5,769,789 | 06/23/1998 | Wang et al. | | |
| 146. | | 5,769,861 | 06/23/1998 | Vilsmeier | | |
| 147. | | 5,772,594 | 06/1998 | Barrick | | |
| 148. | | 5,775,322 | 07/07/1998 | Silverstein et al. | | |
| 149. | | 5,782,765 | 07/21/1998 | Jonkman | | |
| 150. | | 5,792,055 | 08/11/1998 | McKinnon | | |
| 151. | | 5,795,294 | 08/18/1998 | Luber et al. | | |
| 152. | | 5,797,849 | 08/1998 | Vesely et al. | | |
| 153. | | 5,799,055 | 08/1998 | Peshkin et al. | | |
| 154. | | 5,799,099 | 08/1998 | Wang et al. | | |
| 155. | | 5,800,535 | 09/01/1998 | Howard, III | | |
| 156. | | 5,802,719 | 09/1998 | O'Farrell, Jr., et al. | | |
| 157. | | 5,807,252 | 9/15/1998 | Hassfeld et al. | | |
| 158. | | 5,810,735 | 09/22/1998 | Halperin et al. | | |
| 159. | | 5,823,192 | 10/1998 | Kalend et al. | | |
| 160. | | 5,823,958 | 10/20/1998 | Truppe | | |
| 161. | | 5,828,725 | 10/27/1998 | Levinson | | |

| | |
|-----------|------------------|
| Examiner: | Date Considered: |
|-----------|------------------|

EXAMINER: Please initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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| FORM HDP-1449 (Based on Form PTO-1449) | | ATTORNEY DOCKET No. | SERIAL No. |
| | | 5074A-000032/COB | 09/494,213 |
| | | APPLICANT | |
| | | Michael A. Martinelli | |
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| U.S. PATENT DOCUMENTS | | | | | | |
|-----------------------|---------------------|-----------------|------------|---------------------|-----------------|------------------------------|
| Ref. Desig. | Examiner's Initials | Document Number | Date | Name | Class/ Subclass | (If appropriate) Filing Date |
| 162. | | 5,834,759 | 11/10/1998 | Glossop | | |
| 163. | | 5,843,076 | 12/1/1998 | Webster, Jr. et al. | | |
| 164. | | 5,848,967 | 12/15/1998 | Cosman | | |
| 165. | | 5,865,846 | 02/02/1999 | Bryan et al. | | |
| 166. | | 5,868,675 | 02/09/1999 | Henrion et al. | | |
| 167. | | 5,871,455 | 09/1999 | Ueno | | |
| 168. | | 5,871,487 | 02/16/1999 | Warner et al. | | |
| 169. | | 5,884,410 | 03/1999 | Prinz | | |
| 170. | | 5,891,157 | 04/06/1999 | Day et al. | | |
| 171. | | 5,904,691 | 05/18/1999 | Barnett et al. | | |
| 172. | | 5,907,395 | 05/1999 | Schultz et al. | | |
| 173. | | 5,921,992 | 07/13/1999 | Costales et al. | | |
| 174. | | 5,923,727 | 07/1999 | Navab | | |
| 175. | | 5,928,248 | 7/27/1999 | Acker | | |
| 176. | | 5,938,603 | 8/17/1999 | Ponzi | | |
| 177. | | 5,947,981 | 09/1999 | Cosman | | |
| 178. | | 5,951,475 | 09/14/1999 | Gueziec et al. | | |
| 179. | | 5,954,796 | 10/12/1999 | Imran | | |
| 180. | | 5,968,047 | 10/10/1999 | Reed | | |
| 181. | | 5,971,997 | 10/1999 | Guthrie et al. | | |

| | |
|-----------|------------------|
| Examiner: | Date Considered: |
|-----------|------------------|

EXAMINER: Please initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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| FORM HDP-1449 (Based on Form PTO-1449) | | ATTORNEY DOCKET No. | SERIAL No. |
| | | 5074A-000032/COB | 09/494,213 |
| | | APPLICANT | |
| | | Michael A. Martinelli | |
| | | FILING DATE | GROUP |
| | | January 24, 2000 | 3737 |

| U.S. PATENT DOCUMENTS | | | | | | |
|-----------------------|---------------------|-----------------|------------|-------------------|-----------------|------------------------------|
| Ref. Desig. | Examiner's Initials | Document Number | Date | Name | Class/ Subclass | (If appropriate) Filing Date |
| 182. | | 5,980,535 | 11/1999 | Barnett et al. | | |
| 183. | | 5,983,126 | 11/09/1999 | Wittkampf | | |
| 184. | | 5,987,960 | 11/1999 | Messner et al. | | |
| 185. | | 5,999,837 | 12/1999 | Messner et al. | | |
| 186. | | 5,999,840 | 12/1999 | Grimson et al. | | |
| 187. | | 6,001,130 | 12/14/1999 | Bryan et al. | | |
| 188. | | 6,006,126 | 12/1999 | Cosman | | |
| 189. | | 6,016,439 | 01/2000 | Acker | | |
| 190. | | 6,050,724 | 04/2000 | Schmitz et al. | | |
| 191. | | 6,059,718 | 05/2000 | Taniguchi et al. | | |
| 192. | | 6,063,022 | 5/16/2000 | Ben-Haim | | |
| 193. | | 6,073,043 | 06/2000 | Schneider | | |
| 194. | | 6,104,944 | 08/15/2000 | Martinelli | | |
| 195. | | 6,118,845 | 09/12/2000 | Simon et al. | | |
| 196. | | 6,122,538 | 09/19/2000 | Sliwa, Jr. et al. | | |
| 197. | | 6,131,396 | 10/17/2000 | Duerr et al. | | |
| 198. | | 6,139,183 | 10/2000 | Graumann | | |
| 199. | | 6,149,592 | 11/2000 | Yanof et al. | | |
| 200. | | 6,156,067 | 12/05/2000 | Bryan et al. | | |
| 201. | | 6,175,756 | 1/16/2001 | Ferre et al. | | |

| | |
|-----------|------------------|
| Examiner: | Date Considered: |
|-----------|------------------|

EXAMINER: Please initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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| FORM HDP-1449 (Based on Form PTO-1449) | | ATTORNEY DOCKET No. | SERIAL No. |
| | | 5074A-000032/COB | 09/494,213 |
| | | APPLICANT | |
| | | Michael A. Martinelli | |
| | | FILING DATE | GROUP |
| | | January 24, 2000 | 3737 |

| U.S. PATENT DOCUMENTS | | | | | | |
|-----------------------|---------------------|-----------------|------------|-------------------|-----------------|------------------------------|
| Ref. Desig. | Examiner's Initials | Document Number | Date | Name | Class/ Subclass | (If appropriate) Filing Date |
| 202. | | 6,223,067 | 04/24/2001 | Vilsmeier | | |
| 203. | | 6,273,896 | 08/14/2001 | Franck et al. | | |
| 204. | | 6,298,262 | 10/02/2001 | Franck et al. | | |
| 205. | | 6,332,089 | 12/2001 | Acker et al. | | |
| 206. | | 6,341,231 | 1/22/2002 | Ferre et al. | | |
| 207. | | 6,351,659 | 02/26/2002 | Vilsmeier | | |
| 208. | | 6,434,415 | 08/13/2002 | Foley et al. | | |
| 209. | | 6,445,943 | 9/3/2002 | Ferre et al. | | |
| 210. | | 6,498,944 | 12/24/2002 | Ben-Haim et al | | |
| 211. | | 6,701,179 | 03/02/2004 | Martinelli et al. | | |
| 212. | | Re. 35,025 | 8/1995 | Anderton | | |
| 213. | | Re. 35,816 | 6/1998 | Schulz | | |

| FOREIGN PATENT DOCUMENTS | | | | | | |
|--------------------------|---------------------|-----------------|---------|---------|-----------------|--------------------|
| Ref. Desig. | Examiner's Initials | Document Number | Date | Country | Class/ Subclass | Translation Yes No |
| 1. | | 964149 | 03/1975 | Canada | | |
| 2. | | EP 0319 844 A1 | 01/1988 | EPO | | |
| 3. | | EP 0350996 A1 | 01/1990 | EPO | | |
| 4. | | EP 0651968 A1 | 08/1990 | EPO | | |

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| Examiner: | Date Considered: |
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EXAMINER: Please initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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| FORM HDP-1449 (Based on Form PTO-1449) | | ATTORNEY DOCKET No. | SERIAL No. |
| | | 5074A-000032/COB | 09/494,213 |
| | | APPLICANT | |
| | | Michael A. Martinelli | |
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(Use several sheets if necessary)

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| FOREIGN PATENT DOCUMENTS | | | | | | |
|--------------------------|---------------------|-----------------|------------|---------|-----------------|--------------------|
| Ref. Desig. | Examiner's Initials | Document Number | Date | Country | Class/ Subclass | Translation Yes No |
| 5. | | EP 0581704 B1 | 07/27/1993 | EPO | | U.S. Equiv |
| 6. | | FR 2417970 | 02/20/1979 | France | | U.S. Equiv |
| 7. | | DE 10085137 | | Germany | | U.S. Equiv |
| 8. | | DE 3042343 A1 | 06/1982 | Germany | | X |
| 9. | | DE 3831278 A1 | 03/1989 | Germany | | U.S. Equiv |
| 10. | | DE 4233978 C1 | 04/1994 | Germany | | U.S. Equiv |
| 11. | | JP 2765738 | | Japan | | X |
| 12. | | WO 88/09151 | 12/01/1988 | PCT | | Abstract |
| 13. | | WO 89/05123 | 06/1989 | PCT | | |
| 14. | | WO 91/04711 | 04/18/1991 | PCT | | Abstract |
| 15. | | WO 92/03090 | 03/05/1992 | PCT | | |
| 16. | | WO 94/23647 | 10/27/1994 | PCT | | |
| 17. | | WO 94/24933 | 11/10/1994 | PCT | | |
| 18. | | WO 96/11624 | 04/25/1996 | PCT | | |
| 19. | | WO 98/38908 | 09/11/1998 | PCT | | |
| 20. | | WO 91/03982 | 04/1991 | WIPO | | |
| 21. | | WO 98/08554 | 03/1998 | WIPO | | |
| 22. | | WO 99/60939 | 12/1999 | WIPO | | |

| | |
|-----------|------------------|
| Examiner: | Date Considered: |
|-----------|------------------|

EXAMINER: Please initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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|--|--|-----------------------|------------|
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| | | APPLICANT | |
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| FOREIGN PATENT DOCUMENTS | | | | | | |
|---------------------------------|---------------------|-----------------|------------|---------|-----------------|--------------------|
| Ref. Desig. | Examiner's Initials | Document Number | Date | Country | Class/ Subclass | Translation Yes No |
| 23. | | WO 01/30437 A1 | 05/03/2001 | WIPO | | |

| OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.) | | | | |
|---|---------------------|---|--|--|
| Ref. Desig. | Examiner's Initials | | | |
| 1. | | Adams et al., "Orientation Aid for Head and Neck Surgeons," Innov. Tech. Biol. Med., Vol. 13, No. 4, 1992, pp. 409-424. | | |
| 2. | | Barrick et al., "Prophylactic Intramedullary Fixation of the Tibia for Stress Fracture in a Professional Athlete," Journal of Orthopaedic Trauma, Vol. 6, No. 2, pp. 241-244 (1992). | | |
| 3. | | Barrick et al., "Technical Difficulties with the Brooker-Wills Nail in Acute Fractures of the Femur," Journal of Orthopaedic Trauma, Vol. 6, No. 2, pp. 144-150 (1990). | | |
| 4. | | Barrick, "Distal Locking Screw Insertion Using a Cannulated Drill Bit: Technical Note," Journal of Orthopaedic Trauma, Vol. 7, No. 3, 1993, pp. 248-251. | | |
| 5. | | Batnitzky et al., "Three-Dimensional Computer Reconstructions of Brain Lesions from Surface Contours Provided by Computed Tomography: A Prospectus," Neurosurgery, Vol. 11, No. 1, Part 1, 1982, pp. 73-84. | | |
| 6. | | Bouazza-Marouf et al.; "Robotic-Assisted Internal Fixation of Femoral Fractures", IMECHE., pp. 51-58 (1995) | | |
| 7. | | Brack et al., "Accurate X-ray Based Navigation in Computer-Assisted Orthopedic Surgery," CAR '98, pp. 716-722. | | |
| 8. | | Bryan, "Bryan Cervical Disc System Single Level Surgical Technique", Spinal Dynamics, 2002, pp. 1-33. | | |
| 9. | | Bucholz et al., "Variables affecting the accuracy of stereotactic localization using computerized tomography," Journal of Neurosurgery, Vol. 79, November 1993, pp. 667-673. | | |
| 10. | | Champeboux et al., "Accurate Calibration of Cameras and Range Imaging Sensors: the NPBS Method," IEEE International Conference on Robotics and Automation, Nice, France, May, 1992. | | |
| 11. | | Champeboux, "Utilisation de Fonctions Splines pour la Mise au Point D'un Capteur Tridimensionnel sans Contact," Quelques Applications Medicales, July 1991. | | |

| | |
|-----------|------------------|
| Examiner: | Date Considered: |
|-----------|------------------|

EXAMINER: Please initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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| | | APPLICANT | |
| | | Michael A. Martinelli | |
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(Use several sheets if necessary)

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| OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.) | | |
|--|---------------------|---|
| Ref. Desig. | Examiner's Initials | |
| 12. | | Cinquin et al., "Computer Assisted Medical Interventions," IEEE Engineering in Medicine and Biology, May/June 1995, pp. 254-263. |
| 13. | | Cinquin et al., "Computer Assisted Medical Interventions," International Advanced Robotics Programme, September 1989, pp. 63-65. |
| 14. | | Clarysse et al., "A Computer-Assisted System for 3-D Frameless Localization in Stereotactic MRI," IEEE Transactions on Medical Imaging, Vol. 10, No. 4, December 1991, pp. 523-529. |
| 15. | | Edward C. Benzel et al., "Magnetic Source Imaging: a Review of the Magneis System of Biomagnetic Technologies Incorporated," Neurosurgery, Vol. 33, No. 2 (Aug. 1993), p. 252-259 |
| 16. | | Feldmar et al., "3D-2D Projective Registration of Free-Form Curves and Surfaces," Rapport de recherche (Inria Sophia Antipolis), 1994, pages 1-44. |
| 17. | | Foley et al., "Fundamentals of Interactive Computer Graphics," The Systems Programming Series, Chapter 7, July 1984, pp. 245-266. |
| 18. | | Foley et al., "Image-guided Intraoperative Spinal Localization," Intraoperative Neuroprotection, Chapter 19, 1996, pp. 325-340. |
| 19. | | Foley, "The StealthStation: Three-Dimensional Image-Interactive Guidance for the Spine Surgeon," Spinal Frontiers, April 1996, pp. 7-9 |
| 20. | | Germano, "Instrumentation, Technique and Technology", Neurosurgery, Vol. 37, No. 2, August, 1995, pgs. 348-350 |
| 21. | | Gildenberg et al., "Calculation of Stereotactic Coordinates from the Computed Tomographic Scan," Neurosurgery, Vol. 10, No. 5, May 1982, pp. 580-586. |
| 22. | | Gonzalez, "Digital Image Fundamentals," Digital Image Processing, Second Edition, 1987, pp. 52-54. |
| 23. | | Gottesfeld Brown et al., "Registration of Planar Film Radiographs with Computer Tomography," Proceedings of MMBIA, June '96, pp. 42-51. |
| 24. | | Gueziec et al., "Registration of Computed Tomography Data to a Surgical Robot Using Fluoroscopy: A Feasibility Study," Computer Science/Mathematics, Sept. 27, 1996, 6 pages. |
| 25. | | Hamadeh et al, "Kinematic Study of Lumbar Spine Using Functional Radiographies and 3D/2D Registration," TIMC UMR 5525 - IMAG |

| | |
|-----------|------------------|
| Examiner: | Date Considered: |
|-----------|------------------|

EXAMINER: Please initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

| | | | |
|--|--|-----------------------|------------|
| FORM HDP-1449 (Based on Form PTO-1449) | | ATTORNEY DOCKET No. | SERIAL No. |
| | | 5074A-000032/COB | 09/494,213 |
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| OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.) | | | |
|--|---------------------|--|--|
| Ref. Desig. | Examiner's Initials | | |
| 26. | | Hamadeh et al., "Automated 3-Dimensional Computed Tomographic and Fluoroscopic Image Registration," Computer Aided Surgery (1998), 3:11-19. | |
| 27. | | Hamadeh et al., "Towards Automatic Registration Between CT and X-ray Images: Cooperation Between 3D/2D Registration and 2D Edge Detection," MRCAS '95, pp. 39-46. | |
| 28. | | Hatch, "Reference-Display System for the Integration of CT Scanning and the Operating Microscope," Thesis, Thayer School of Engineering, October 1984, pp. 1-189. | |
| 29. | | Hatch, et al., "Reference-Display System for the Integration of CT Scanning and the Operating Microscope", Proceedings of the Eleventh Annual Northeast Bioengineering Conference, May, 1985, pgs. 252-254 | |
| 30. | | Heilbrun et al., "Preliminary experience with Brown-Roberts-Wells (BRW) computerized tomography stereotaxic guidance system," Journal of Neurosurgery, Vol. 59, August 1983, pp. 217-222. | |
| 31. | | Henderson et al., "An Accurate and Ergonomic Method of Registration for Image-guided Neurosurgery," Computerized Medical Imaging and Graphics, Vol. 18, No. 4, July-August 1994, pp. 273-277. | |
| 32. | | Hoerenz, "The Operating Microscope I. Optical Principles, Illumination Systems, and Support Systems," Journal of Microsurgery, Vol. 1, 1980, pages 364-369. | |
| 33. | | Hofstetter et al., "Fluoroscopy Based Surgical Navigation - Concept and Clinical Applications," Computer Assisted Radiology and Surgery, 1997, pages 956-960. | |
| 34. | | Horner et al., "A Comparison of CT-Stereotaxic Brain Biopsy Techniques," Investigative Radiology, Sep.-Oct. 1984, pp. 367-373. | |
| 35. | | Hounsfield, "Computerized transverse axial scanning (tomography): Part 1. Description of system," British Journal of Radiology, Vol. 46, No. 552, December 1973, pp. 1016-1022. | |
| 36. | | Jacques et al., "A Computerized Microstereotactic Method to Approach, 3-Dimensionally Reconstruct, Remove and Adjuvantly Treat Small CNS Lesions," Applied Neurophysiology, Vol. 43, 1980, pp. 176-182. | |
| 37. | | Jacques et al., "Computerized three-dimensional stereotaxic removal of small central nervous system lesion in patients," J. Neurosurg., Vol. 53, December 1980, pp. 816-820. | |
| 38. | | Joskowicz et al., "Computer-Aided Image-Guided Bone Fracture Surgery: Concept and Implementation," CAR '98, pp. 710-715. | |
| 39. | | Kelly et al., "Computer-assisted stereotaxic laser resection of intra-axial brain neoplasms," Journal of Neurosurgery, Vol. 64, March 1986, pp. 427-439. | |

| | |
|-----------|------------------|
| Examiner: | Date Considered: |
|-----------|------------------|

EXAMINER: Please initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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| | | APPLICANT | |
| | | Michael A. Martinelli | |
| | | FILING DATE | GROUP |
| | | January 24, 2000 | 3737 |
| Sheet 16 of 19 | | | |

| OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.) | | | |
|--|---------------------|--|--|
| Ref. Desig. | Examiner's Initials | | |
| 40. | | Kelly et al., "Precision Resection of Intra-Axial CNS Lesions by CT-Based Stereotactic Craniotomy and Computer Monitored CO ₂ Laser," <i>Acta Neurochirurgica</i> , Vol. 68, 1983, pp. 1-9. | |
| 41. | | Laitinen et al., "An Adapter for Computed Tomography-Guided, Stereotaxis," <i>Surg. Neurol.</i> , 1985, pp. 559-566. | |
| 42. | | Laitinen, "Noninvasive multipurpose stereoadapter," <i>Neurological Research</i> , June 1987, pp. 137-141. | |
| 43. | | Lavallee et al., "Matching 3-D Smooth Surfaces with their 2-D Projections using 3-D Distance Maps," <i>SPIE</i> , Vol. 1570, <i>Geometric Methods in Computer Vision</i> , 1991, pp. 322-336. | |
| 44. | | Lavallee et al., "Computer Assisted Driving of a Needle into the Brain," <i>Proceedings of the International Symposium CAR '89, Computer Assisted Radiology</i> , 1989, pp. 416-420. | |
| 45. | | Lavallee et al., "Computer Assisted Interventionist Imaging: The Instance of Stereotactic Brain Surgery," <i>North-Holland MEDINFO 89</i> , Part 1, 1989, pp. 613-617. | |
| 46. | | Lavallee et al., "Computer Assisted Spine Surgery: A Technique For Accurate Transpedicular Screw Fixation Using CT Data and a 3-D Optical Localizer," <i>TIMC, Faculte de Medecine de Grenoble</i> . | |
| 47. | | Lavallee et al., "Image guided operating robot: a clinical application in stereotactic neurosurgery," <i>Proceedings of the 1992 IEEE International Conference on Robotics and Automation</i> , May 1992, pp. 618-624. | |
| 48. | | Lavallee et al., "Matching of Medical Images for Computed and Robot Assisted Surgery," <i>IEEE EMBS, Orlando</i> , 1991. | |
| 49. | | Lavallee, "A New System for Computer Assisted Neurosurgery," <i>IEEE Engineering in Medicine & Biology Society 11th Annual International Conference</i> , 1989, pp. 0926-0927. | |
| 50. | | Lavallee, "VI Adaption de la Methodologie a Quelques Applications Cliniques," <i>Chapitre VI</i> , pp. 133-148. | |
| 51. | | Leksell et al., "Stereotaxis and Tomography - A Technical Note," <i>ACTA Neurochirurgica</i> , Vol. 52, 1980, pp.1-7. | |
| 52. | | Lemieux et al., "A Patient-to-Computed-Tomography Image Registration Method Based on Digitally Reconstructed Radiographs," <i>Med. Phys.</i> 21 (11), November 1994, pp. 1749-1760. | |

| | |
|-----------|------------------|
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| OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.) | | | |
|--|---------------------|--|--|
| Ref. Desig. | Examiner's Initials | | |
| 53. | | Levin et al., "The Brain: Integrated Three-dimensional Display of MR and PET Images," Radiology, Vol. 172, No. 3, September 1989, pp. 783-789. | |
| 54. | | Mazier et al., "Computer-Assisted Interventionist Imaging: Application to the Vertebral Column Surgery," Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Vol. 12, No. 1, 1990, pp. 0430-0431. | |
| 55. | | Mazier et al., Chirurgie de la Colonne Vertébrale Assistée par Ordinateur: Application au Vissage Pediculaire, Innov. Tech. Biol. Med., Vol. 11, No. 5, 1990, pp. 559-566. | |
| 56. | | Merloz, et al., "Computer Assisted Spine Surgery", Clinical Assisted Spine Surgery, No. 337, pgs. 86-96 | |
| 57. | | Pelizzari et al., "Accurate Three-Dimensional Registration of CT, PET, and/or MR Images of the Brain," Journal of Computer Assisted Tomography, January/February 1989, pp. 20-26. | |
| 58. | | Pelizzari et al., "Interactive 3D Patient-Image Registration," Information Processing in Medical Imaging, 12th International Conference, IPMI '91, July 7-12, 136-141 (A.C.F. Colchester et al. eds. 1991). | |
| 59. | | Pelizzari et al., No. 528 - "Three Dimensional Correlation of PET, CT and MRI Images," The Journal of Nuclear Medicine, Vol. 28, No. 4, April 1987, p.682. | |
| 60. | | Phillips et al., "Image Guided Orthopaedic Surgery Design and Analysis," Trans Inst. MC, Vol. 17, No. 5, 1995, pp. 251-264. | |
| 61. | | Potamianos et al., "Intra-Operative Imaging Guidance for Keyhole Surgery Methodology and Calibration," First International Symposium on Medical Robotics and Computer Assisted Surgery, September 22-24, 1994, pp. 98-104. | |
| 62. | | "Prestige Cervical Disc System Surgical Technique", 12 pgs. | |
| 63. | | Reinhardt et al., "CT-Guided 'Real Time' Stereotaxy," ACTA Neurochirurgica, 1989. | |
| 64. | | Roberts et al., "A frameless stereotaxic integration of computerized tomographic imaging and the operating microscope," J. Neurosurg., Vol. 65, October 1986, pp. 545-549. | |
| 65. | | Rosenbaum et al., "Computerized Tomography Guided Stereotaxis: A New Approach," Applied Neurophysiology, Vol. 43, No. 3-5, 1980, pp. 172-173. | |
| 66. | | Sautot, "Vissage Pediculaire Assiste Par Ordinateur," September 20, 1994. | |
| 67. | | Schueler et al., "Correction of Image Intensifier Distortion for Three-Dimensional X-Ray Angiography," SPIE Medical Imaging 1995, Vol. 2432, pp. 272-279. | |

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| OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.) | | |
|--|---------------------|--|
| Ref. Desig. | Examiner's Initials | |
| 68. | | Selvik et al., "A Roentgen Stereophotogrammetric System," Acta Radiologica Diagnosis, 1983, pp. 343-352. |
| 69. | | Shelden et al., "Development of a computerized microsteroetaxic method for localization and removal of minute CNS lesions under direct 3-D vision," J. Neurosurg., Vol. 52, 1980, pp. 21-27. |
| 70. | | Smith et al., "Computer Methods for Improved Diagnostic Image Display Applied to Stereotactic Neurosurgery," Automedical, Vol. 14, 1992, pp. 371-382. |
| 71. | | Smith et al., "The Neurostation™--A Highly Accurate, Minimally Invasive Solution to Frameless Stereotactic Neurosurgery," Computerized Medical Imaging and Graphics, Vol. 18, July - August 1994, pp. 247-256. |
| 72. | | The Laitinen Stereotactic System, E2-E6. |
| 73. | | Viant et al., "A Computer Assisted Orthopaedic System for Distal Locking of Intramedullary Nails," Proc. of MediMEC '95, Bristol, 1995, pp. 86-91. |
| 74. | | Watanabe et al., "Three-Dimensional Digitizer (Neuronavigator): New Equipment for Computed Tomography-Guided Stereotactic Surgery," Surgical Neurology, Vol. 27, No. 6, June 1987, pp. 543-547. |
| 75. | | Watanabe, "Neuronavigator," Igaku-no-Ayumi, Vol. 137, No. 6, May 10, 1986, pp. 1-4. |
| 76. | | Weese et al., "An Approach to 2D/3D Registration of a Vertebra in 2D X-ray Fluoroscopies with 3D CT Images," pp. 119-128. |

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